

Remarks

With entry of the amendment, claims 1-30 and 35-51 are pending. Claims 14-30 and 42-47 are withdrawn from consideration as directed to a non-elected invention; claims 31-34 are canceled, and claims claims 49-51 are newly added.

Claim amendments

Claims 1, 10, 35, 39, 41, and 48 were amended to reflect that one or more of R_2 and R_3 may include an alkoxy moiety. Support for the amendments can be found at least at paragraphs 44 and 45. Claims 1, 2, 10, 35, 39, 41, and 48 were amended to replace “ M^+ ” in the chemical structure of R_1 with “M” to correct a typographical error, consistent with the subsequent occurrence of “M” in the claims. Support for the amendments can be found in claims 1, 10, 35, 39, 41, and 48 as originally filed and at paragraphs 49 and 50 of the specification. Claim 48 was also amended to correct a typographical error, namely duplication of the word “least” in the preamble of the claim. The amendments introduce no new matter.

Election / Restriction Requirement

The Examiner has set forth a restriction requirement, requiring election of one of the following inventions: Group I, claims 1-13, 35-41 and 48, drawn to methods of isolating target materials; Group II, claims 14-19 and 25-30, drawn to methods of isolating [membrane]-associated proteins and cells from starting materials; Group III, claims 20-22 and 42-47, drawn to a kit for separating target materials from non-target materials; Group IV, claims 23-24, drawn to a method for reducing metal ions in a fluid; and Group V, claims 31-34, drawn to a method for detecting protein in a starting material.

Applicants affirm their provisional election of Group I claims with traverse. The Manual of Patent Examining Procedure (“MPEP”) states that:

If the search and the examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.

MPEP § 803. Applicants respectfully submit that the methods of the present invention could be examined together without placing any serious burden on the United States Patent and Trademark Office. In the interest of administrative efficiency, Applicants respectfully request that the restriction requirement be withdrawn.

Drawings

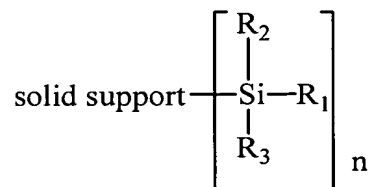
In the Office Action, Figures 2, 3A, 3B, 4, 6, 7, 8, 9A, 9C, 10, 11, 12, 15, 16A, 17A, 18A, 19, 20, 21, 22, 23A, 23C, and 24 were objected to due to the purported low quality of the photographs. Substitute Figures are submitted with this Response. Accordingly, Applicants respectfully request the withdrawal of the objection to the Figures.

Rejections Under Section 102(b) over Bruening et al.

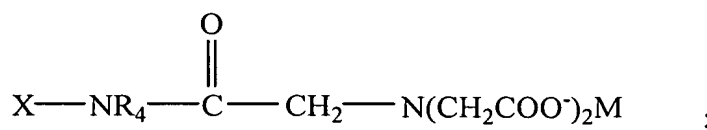
Claims 1-3 were rejected under 35 U.S.C. §102(b) as anticipated by Bruening et al. (U.S. Patent No. 5,250,188). The Examiner characterizes Bruening et al. as teaching a method for the quantitative removal and concentration of desired molecules or ions, such as gases, anions and amino acids, from a source solution, which comprises bringing the source solution into contact with a solid cation-ligand-matrix consisting of a cation complexed to a ligand molecule covalently bonded to a matrix consisting of an organic spacer bonded to a solid inorganic support through a silicon atom. (Office Action at page 5). Citing to column 5, lines 24-43 of Bruening et al., the Examiner asserts that amino acids are one class of preferred ligands for the Bruening et al. solid cation-ligand-matrix. The Examiner concluded that Applicants' choice of "nitrilotriacetic acid (NTA) as the ligand would have been at one (sic) envisaged since NTA are very well known amino acids." (Office Action at page 6).

Applicants respectfully submit that none of claims 1-3 is anticipated by Bruening et al. because the reference fails to teach each and every element of the claims. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). "The elements must be arranged as required by the claim, but . . . identity of terminology is not required." *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). *MPEP* § 2131.

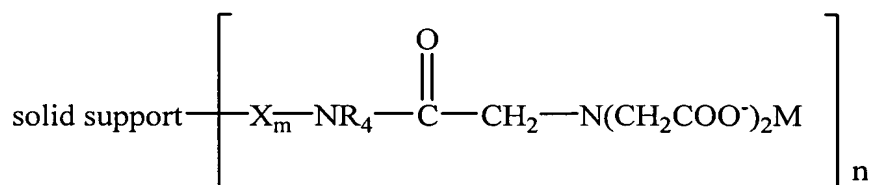
Claim 1 is drawn to a method of isolating a target material from a starting material by contacting the starting material with a composition selected from:



wherein R₁ is



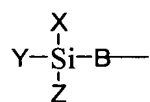
and



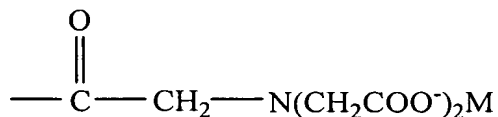
The substituents of X, R₂, R₃, R₄, M and n are defined as set forth in claim 1. Claims 2 and 3 depend directly from claim 1. Claim 2 is drawn to species of claim 1 with particular substituents for X, R₄ and M. Claim 3 includes washing and eluting steps.

Applicants note that Bruening et al. does not teach, nor does the Office Action contend that Bruening et al. teaches, a method using a composition in which the ligand is linked directly to the solid support through a non-silane containing linker, according to the second member of the Markush group of claim 1.

Bruening et al. discloses a solid cation-ligand-matrix of the general formula Matrix-L-M, wherein M is a metal cation, L is a coordination ligand “consisting of” an organic molecule known to chelate metal cations, and Matrix is a member having the formula:



wherein B is a spacer grouping having from 1 to 10 carbon atoms. Apparently, the Examiner considers R₁ of the claimed invention to be equivalent to B-L-M of Bruening et al., with L-M of Bruening et al. corresponding to

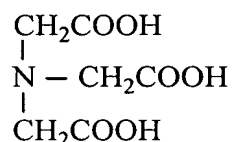


and B corresponding to X-NR₄ of the first member of the Markush group of claim 1.

Bruening et al. does not specifically disclose NTA as being suitable for use as a ligand. To the contrary, at column 7, line 42, NTA was listed as a “desired molecule”, i.e., a molecule that could be removed or concentrated from an admixture of other molecules in a solution using a solid cation-ligand-matrix (column 1, lines 8-11). Additionally, NTA is disclosed as being potentially useful as a “receiving solution” (column 10, lines 64-68), which is apparently synonymous with an elution buffer, but nowhere in the disclosure of Bruening et al. is NTA disclosed as a potential ligand.

Bruening et al. does not teach how such a ligand would be covalently bonded to B (i.e., what the covalent bond between the spacer and an NTA-based ligand would be). Therefore, Bruening et al. fails to teach each and every element of the claimed invention.

Contrary to the Examiner’s characterization of NTA as being “a very well known amino acid”, NTA is not an amino acid. Amino acids are understood by those of ordinary skill in the art to encompass a class of molecules that contain both amino (NH₂) and carboxy functional groups. In contrast, NTA lacks an amino group and is, therefore, not an amino acid. To the contrary, NTA is, in fact, a tertiary amine having the following structure:



Bruening et al. provides a list of generic classes of unspecified potential ligands. Ligands disclosed as being potentially useful “are generally members selected from the group consisting of amines, pyridines, amino acids, thiols, phenantrolines, hydroxamic acids, oximes, amides, thioethers, and combinations thereof” (column 5, lines 39-43). Applicants acknowledge that as a tertiary amine, NTA falls within the scope of one of the nine broad classes of compounds disclosed as being potentially useful as a ligand. However, from among innumerable compounds encompassed by that listing, which could be bonded in various ways to one of several different spacers to generate countless possible compositions, Bruening et al. describes and exemplifies the preparation of only four such compositions (column 8, Examples 1-4). Bruening et al. does not show the identical invention in as complete detail as is contained in claims 1-3, and therefore does not anticipate the claims.

Applicants direct the Examiner’s attention to Bruening et al. column 5, lines 24-28, at which the ligand is defined as one that will complex with the cation without using all of the coordination sites available to that cation in the formation of complexes or which allows for

ion pairing interaction of the cation to be maintained. A matrix-ligand-cation having a net positive charge is essential to operability in the methods of Bruening et al. Therefore, Applicants' claimed invention would be inoperative in the method of Bruening et al. when the metal ion is neutralized by the two carboxylic acid residues of the NTA-based moiety (i.e., the metal ion is +2 or lower). Therefore, the composition used in the method of claim 2, which has nickel with an oxidation state of +2, is not anticipated by Bruening et al.

As explained above, Bruening et al. does not disclose the compounds used in the claimed methods. Furthermore, Applicants do not concede that Bruening et al. teaches a genus that encompasses the compositions used in the present invention. However, for the sake of argument, even if Bruening et al. teaches the genus, the claimed species is not anticipated by Bruening et al. The MPEP states that

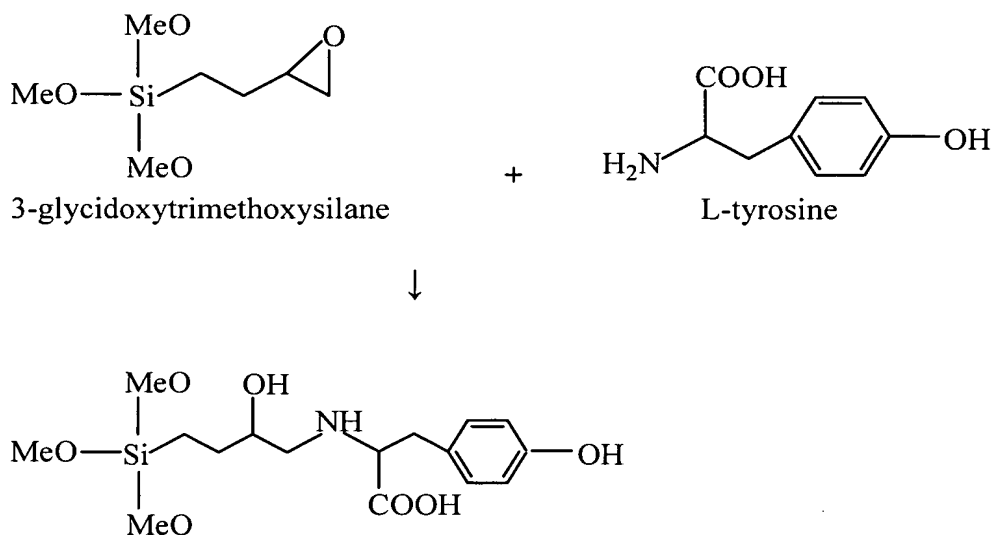
[w]hen the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated.

MPEP §2131.02 *citing Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Interf. 1990). If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to *draw the structural formula or write the name of each of the compounds included in the generic formula* before any of the compounds can be "at once envisaged." One may look to the preferred embodiments to determine which compounds can be anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962). MPEP §2131.02 (Italics and underlining added for emphasis).

Applicants submit that the disclosure of Bruening et al. is not sufficiently limited or well delineated to anticipate the claimed invention. As noted above, the list of preferred ligands disclosed by Bruening et al. includes "members selected from the group consisting of amines, pyridines, amino acids, thiols, phenantrolines, hydroxamic acids, oximes, amides, thioethers, and combinations thereof", and thus encompasses a vast number of compounds. The total number of compounds becomes innumerable when combined with a variety of spacer groups and metals which may be bonded in a variety of ways to generate an almost infinite number of potential combinations. One of ordinary skill in the art could not draw the structural formula or write the name of each of the compounds included in the nine classes of compounds listed as potential ligands, much less the compounds encompassed by the generic

formula. Therefore, only those compounds specifically disclosed in Bruening et al. can be "at once envisaged" from its disclosure.

In the Examples provided in Bruening et al., the ligand matrix was prepared by reacting 3-glycidoxypropyltrimethoxysilane with ethylenediamine (Example 1), ethanedithiol (Example 2), triethylene tetraamine (Example 3), or L-tyrosine (Example 4). In each case, the ligand contains either a free amino group or a free thiol or sulfhydryl group that participates in a reaction to bind the ligand to the spacer. The reaction is illustrated below for L-tyrosine.



Because NTA does not have a free amino group or thiol group, it would not react in the same way as those compounds exemplified as ligands in Bruening et al. Clearly, based on the Examples of Bruening et al., one of ordinary skill in the art would not at once envisage Applicants' claimed invention.

Thus, Applicants submit that one of ordinary skill in the art would not "at once envisage" the methods of claims 1, 2 or any claim dependent therefrom. In view of the foregoing, Applicants respectfully request that the rejection under 35 U.S.C. § 102 over Bruening et al. be withdrawn.

Rejections Under Section 103(a) over Bruening et al.

Claims 1-3 were rejected under 35 U.S.C. § 103(a) as obvious over Bruening et al. Applicants respectfully submit that the Office Action fails to set forth a *prima facie* case of obviousness, which requires: 1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to

modify or combine the teachings; 2) a reasonable expectation of success; and 3) the references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

Bruening et al. does not teach or suggest all of the elements of claims 1-3, as explained in detail above in response to the rejection of claims under 35 U.S.C. § 102(b) over Bruening et al.

Furthermore, Bruening et al. provides no motivation to modify the methods disclosed therein to make Applicants' claimed invention. Bruening et al. teaches that NTA is a "desired" molecule, i.e., one that can be isolated using the disclosed compositions, and that NTA can be used as a "receiving solution" (i.e., an elution buffer) in the disclosed methods. One of ordinary skill in the art would not be motivated to modify Bruening et al. to practice the claimed methods, because there is no disclosure that NTA would be a suitable ligand in the disclosed matrix-ligand-cation complexes.

Applicants do not concede that Bruening et al. teaches a genus that encompasses Applicants' invention. However, for the sake of argument, even if Bruening et al. teaches a genus encompassing the methods of any of claims 1-3, the fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness. MPEP § 2144.08 citing *In re Baird*, 16 F.3d 380, 382 (Fed. Cir. 1994). A *prima facie* case of obviousness also requires that one of ordinary skill in the art would have been motivated to select the claimed species from the disclosed prior art genus. See, e.g., *In re Ochiai*, 71 F.3d at 1569-70, 37 USPQ2d at 1131; *In re Deuel*, 51 F.3d at 1557, 34 USPQ2d at 1214 ("[A] *prima facie* case of unpatentability requires that the teachings of the prior art suggest *the claimed compounds* to a person of ordinary skill in the art." (emphasis in original)); *In re Jones*, 958 F.2d at 351, 21 USPQ2d at 1943-44 (Fed. Cir. 1992); *In re Dillon*, 919 F.2d at 692, 16 USPQ2d at 1901; *In re Lalu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984) ("The prior art must provide one of ordinary skill in the art the motivation to make the proposed molecular modifications needed to arrive at the claimed compound."). MPEP § 2144.08(II)(4).

Bruening et al. does not provide motivation to select the claimed species from the disclosed genus, which is so vast that it is impossible to number, let alone draw or name, its members. There is no express teaching that would have provided motivation to make the selection, nor is there structural similarity between Applicants' compositions and those

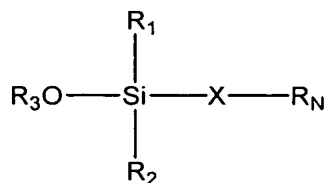
exemplary compounds taught by Bruening et al. that would have motivated one of ordinary skill in the art to select Applicants' compositions.

In view of the foregoing, Applicants respectfully submit that the Examiner has not set forth a *prima facie* case of obviousness for any of claims 1-3 and request that the rejections over Bruening et al. be withdrawn.

Rejection under 35 U.S.C. §103(a) over Bruening et al. in view of McCulloch et al., Montforte et al. or Regnier et al.

Claims 4-13, 35-41 and 48 were rejected under 35 U.S.C. §103(a) as obvious over Bruening et al. optionally in view of McCulloch et al. (U.S. Patent No. 6,106,724), Montforte et al. (U.S. Patent No. 5,700,642) or Regnier et al. (U.S. Application Publication No. 2002/0037532). The Office Action notes that Bruening et al. does not provide a direct teaching to isolate the specific target materials as claimed in the present invention. The Examiner also conceded that, with respect to claim 10, there is no disclosure of first chelating the target material with a non-NTA/salt containing silane prior to chelating with the solid support NTA/salt. The Office Action contends that all three secondary references teach use of non-NTA/salt-containing silane compounds, optionally attached to a solid support, as chelating agents for proteins, polypeptides, amino acids, affinity tags and/or nucleic acids. See Office Action at page 9. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to use the broad disclosure of Bruening et al. as motivation to actually chelate Applicant's claimed target materials. The Examiner suggests that Applicant's target materials either fall within the broad disclosure of Bruening et al. or that any one of the secondary references combined with Bruening et al. provides the motivation to use Applicant's method to isolate Applicant's target materials. Finally, the Examiner asserts that the secondary references provide support for the additional method step of claim 10.

Applicants respectfully submit that the Office Action fails to set forth a *prima facie* case of obviousness for claims 4-13, 35-41 or 48, because the combination of Bruening et al., McCulloch et al., Montforte et al., and Regnier et al. does not teach or suggest all of the elements of the claims. Claims 4-9 depend from claim 1, and include limitations to particular types of target molecules. Independent claim 10 and its dependent claims 11-13 are similar to claim 1, except that prior to contacting the material comprising the target material with one of the compositions as shown in claim 1 (in claims 10-13, "a second composition"), the starting material is first contacted with another composition ("a first composition"), the formula of which is shown immediately below, to remove non-target material.



The substituents of X, R₁, R₂, R₃ and R_N are described in claim 10. Claims 35-41 and 48 are analogous to claim 1 but contain additional limitations. Claims 35-38 are limited to nucleic acids as the target material. Claims 39-40 are drawn to methods of assaying the activity of an enzyme in a starting material. Claim 41 is drawn to separating phosphoproteins from a starting material. Claim 48 is limited to polypeptides and the method requires a further step of sequentially eluting the polypeptides.

If an independent claim is nonobvious, then any claim depending therefrom is nonobvious. MPEP §2143.03 citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claims 4-13, 35-41 and 48 are either dependent from claim 1 or analogous to claim 1. Therefore, the cited secondary references must cure the deficiencies of Bruening et al. with regard to claim 1 in order to render the present invention obvious.

The cited secondary references do not cure the deficiencies of Bruening et al., as detailed above in response to the rejection of claims 1-3 under 35 U.S.C. § 102(b) and § 103(a), in that the combination of references do not teach all of the claim limitations. Bruening et al. does not specifically disclose use of NTA as a ligand. The Office Action states that “all three secondary references directly teach that it is very well known in the art to use non-nitrilotriacetic acid/salt containing silane compounds.” See Office Action at page 7 (emphasis added). Indeed, none of the secondary references teach or suggest using NTA as a chelator. The secondary references do not cure the deficiencies of Bruening et al. with respect to claim 1 and thus do not support an obviousness rejection of claims 4-9 which depend, either directly or indirectly, from claim 1. Claims 10-13, 35-41 and 48 do not depend from claim 1, but are drawn to methods utilizing the same NTA-containing compositions as those recited in claim 1. Therefore these claims are non-obvious for at least the same reasons as claims 1-3 discussed above, namely, the combination of the references does not teach or suggest the compositions used in the present invention.

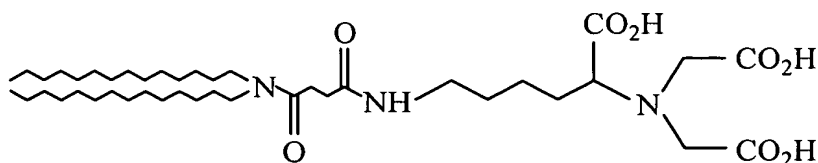
In addition, the references do not provide motivation to modify the disclosures to make Applicant’s claimed invention. “In determining the propriety of the Patent Office case for obviousness...it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before

him to make the proposed substitution, combination, or other modification." MPEP § 2143.01 (I) citing *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Bruening et al. discloses use of NTA as a "desired molecule" to be isolated using the disclosed compositions or as a component of the elution buffer, but not as a suitable ligand in the matrix-ligand cation complexes. The three secondary references contain no reference to NTA at all. These references are cited by the Examiner as teaching use of non-NTA/salt containing silane compounds as chelating agents for proteins, polypeptides, amino acids, affinity tags and/or nucleic acids. See Office Action at page 7. While Applicants concede that these references teach methods of isolating some of the specific target materials disclosed in the present invention, none of the references teach use of the compositions disclosed in the present invention. One of ordinary skill in the art with these references in hand would not be motivated to combine and modify the teachings of these references to practice the claimed methods. Thus, for at least the reasons above, a *prima facie* case of obviousness for claims 4-13, 35-41 and 48 over the combination of Bruening et al., McCulloch et al., Montforte et al., and Regnier et al. has not been established.

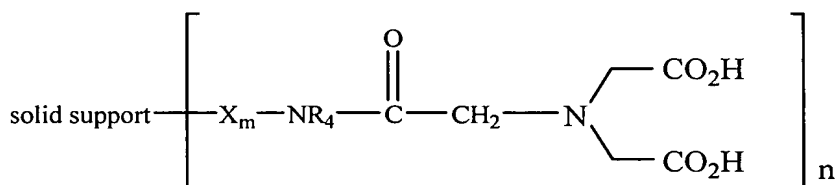
Rejection under 35 U.S.C. §102(b) over Altin et al.

Claims 1-9 and 48 were rejected under 35 U.S.C. §102(b) as anticipated by Altin et al. (*Biochimica et Biophysica Acta* 1513 (2001) 131-148). The Office Action states that Altin et al. teaches a chelator lipid nitrilotriacetic acid ditetradecyclamine (NTA-DTDA) deposited on a solid support such as glass slides or silicon nitride, and concludes that the NTA-DTDA directly reads on the non-silane containing chelating starting materials of the present invention. Altin et al. teaches synthesis of NTA-DTDA, incorporation of NTA-DTDA into liposomes, deposition and fusion of the liposomes on surfaces to form a lipid bilayer on the surface. See Altin et al. pages 133-135. Altin et al. does not teach, and the Office Action does not contend that Altin et al. teaches, a method using a composition with a silane containing linker.

Applicants respectfully submit that none of claims 1-9 and 48 is anticipated by Altin et al. because the reference fails to teach each and every element of the claims. The structure of NTA-DTDA is clearly distinct from that of the compositions of claims 1 and 48 used in the methods of the present invention as diagrammed below.



NTA-DTDA of Altin et al. (redrawn to clarify distinction).



The non-silane containing composition of the present invention (drawn without the chelated metal).

First, in the compositions of the claimed methods, the NTA portion is bonded to a moiety (X-NR₄) distinct from the lipid moieties of NTA-DTDA. Second, the NTA portion of the composition of claims 1-9 and 48 is bonded to the spacer via one of its carboxylic moieties. In contrast, the NTA portion of NTA-DTDA in Altin et al. is bonded to the spacer via an internal carbon atom, leaving all three carboxylic acid moieties of the NTA portion intact and free. Finally, the NTA is linked to the spacer via an amide bond in the present invention and Altin et al. uses a carbon-carbon linkage. The resulting compounds are clearly structurally distinct. In addition to these structural differences, Altin et al. teaches incorporation of the composition into liposomes and fusion of the liposomes onto a solid surface. In contrast, the present invention links the composition to a solid surface via a covalent bond. Applicants respectfully submit that Altin et al. does not teach or suggest every element of the present invention and therefore, for at least the reasons discussed, does not anticipate claims 1, 48 or any claim dependent therefrom. Applicants respectfully request that the rejection under 35 U.S.C. §102 over Altin et al. be withdrawn.

Rejection under 35 U.S.C. §103(a) over Altin et al.

Claims 1-9 and 48 were rejected under 35 U.S.C. §103(a) as unpatentable over Altin et al. Applicants respectfully submit that the Office Action fails to set forth a *prima facie* case of obviousness. Altin et al. does not teach or suggest all of the elements of claims 1-9 or 48, as explained in detail in response to the anticipation rejection. Additionally, Altin et al. provides no motivation to modify its disclosure to arrive at the claimed methods. The composition disclosed by Altin et al. is distinct from that of the present invention and Altin et al. contains no disclosure suggesting modification of its disclosed composition. One of

ordinary skill in the art with the disclosure of Altin et al. in hand would not be motivated to alter not only the attachment to a support structure and the spacer region of the composition, but also the reactive groups in the chelator (the NTA portion) to arrive at the present invention. In view of the foregoing, Applicants respectfully submit that the Examiner has failed to set forth a prima facie case of obviousness for any of claims 1-9 and 48. Applicants respectfully request that the obviousness rejections over Altin et al. be withdrawn.

Rejection under 35 U.S.C. §103(a) over Altin et al. in view of McCulloch et al., Montforte et al. or Regnier et al.

Claims 10-13 and 35-41 were rejected under 35 U.S.C. §103(a) as obvious over Altin et al. optionally in view of McCulloch et al., Montforte et al. or Regnier et al. The Office Action notes that Altin et al. does not provide a direct teaching to isolate the specific target materials as claimed in the present invention. The Examiner also conceded that, with respect to claim 10, there is no disclosure of first chelating the target material with a non-NTA/salt containing silane prior to chelating with the solid support NTA/salt. The Office Action contends that all three secondary references teach use of non-NTA/salt-containing silane compounds, optionally attached to a solid support, as chelating agents for proteins, polypeptides, amino acids, affinity tags and/or nucleic acids. See Office Action at page 9. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to use the broad disclosure of Altin et al. as motivation to actually chelate Applicant's claimed target materials. The Examiner suggests that Applicant's target materials either fall within the broad disclosure of Altin et al. or that any one of the secondary references combined with Altin et al. provides the motivation to use Applicant's method to isolate Applicant's target materials. Finally, the Examiner asserts that the secondary references provide support for the additional method step of claim 10.

Applicants respectfully submit that the Office Action fails to set forth a *prima facie* case of obviousness for claims 10-13 and 35-41, because the combination of Altin et al., McCulloch et al., Montforte et al. and Regnier et al. fail to teach or suggest all of the elements of the claims. As explained above regarding the combination of these same secondary references with Bruening et al., these references do not teach or suggest a composition structurally similar to that of the present invention. Claims 10-13 and 35-41 are drawn to additional methods of using the same compositions delineated in claim 1. Therefore, the secondary references must cure the deficiencies of Altin et al. regarding the compositions used in claim 1 in order to render the present invention obvious. As explained

in detail above, the secondary references do not teach or suggest use of NTA as a chelator, much less how NTA could be attached to a spacer to form the compositions disclosed in the present invention. The secondary references do not cure the deficiencies of Altin et al. with respect to any of the claims because the combination of references still does not teach or suggest every limit of claims 10-13 and 35-41.

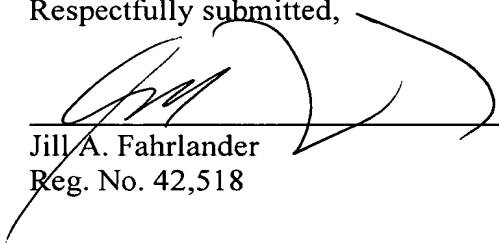
Furthermore, even if these references did teach or suggest all of the elements of the claims, the Office Action does not point to, and the references do not provide, any motivation to modify or combine their disclosures to arrive at Applicants claimed invention. For at least the reasons set forth above, a *prima facie* case of obviousness has not been established. Applicants respectfully request that the obviousness rejections over the combination of Altin et al., McCulloch et al., Montforte et al. and Regnier et al. be withdrawn.

Conclusion

Applicants respectfully submit that the claims as amended are in condition for allowance. Should the Examiner feel that anything warrants further discussion, the Examiner is encouraged to contact the undersigned at the phone number below.

No fee is believed due in connection with this submission. In the event that any fee is due, please charge or credit Deposit Account No. 50-0842 for such fee.

Respectfully submitted,



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